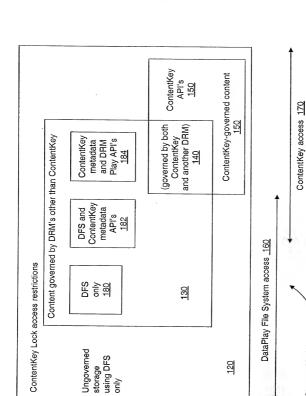
Attorney Docket No.: First Inventor: Title:

M-12039 US Steven B. Volk

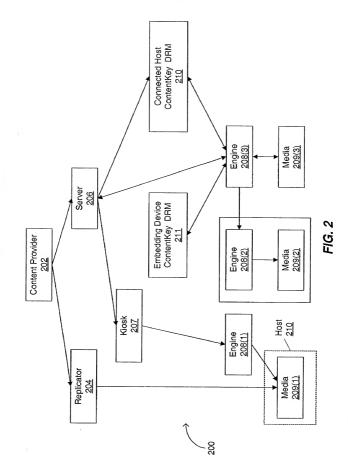
System and Method for Identifying Vendors of Hidden Content

Content Storage Model



Title:

System and Method for Identifying Vendors of Hidden Content



Attorney Docket No.: M-12039 US First Inventor:

Steven B. Volk

System and Method for Identifying Vendors of Hidden Title:

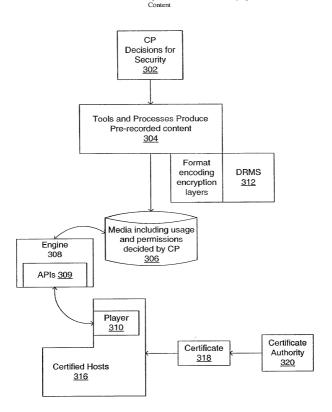


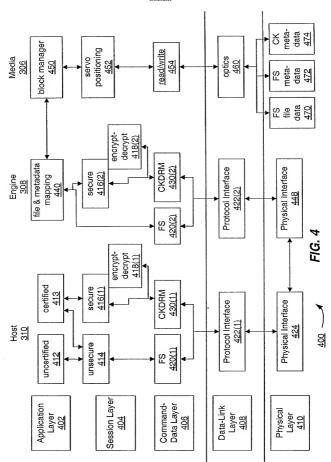
FIG. 3

Attorney Docket No.: First Inventor:

Title:

M-12039 US Steven B. Volk

System and Method for Identifying Vendors of Hidden



Attorney Docket No.: M-12039 US First Inventor:

Steven B. Volk

Title:

System and Method for Identifying Vendors of Hidden

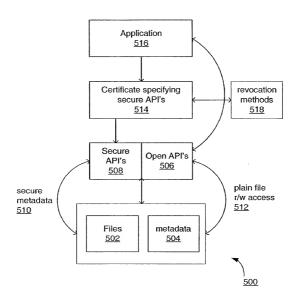


FIG. 5A

Attorney Docket No.: M-12039 US First Inventor: Steven B. Vo Steven B. Volk
System and Method for Identifying Vendors of Hidden Title: Content Permit access under predetermined authenticating a channel, checking a revocation list and unlocking Attach content rights to media Host receive certificate (514) Perform one or more of conditions content 550 552 554 556



Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Method for Identifying Vendors of Hidden

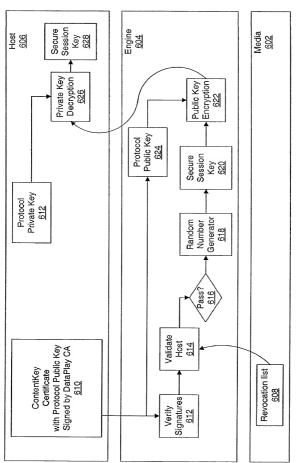


FIG. 6

Attorney Docket No.: M-12039 US First Inventor:

Title:

Steven B. Volk

System and Method for Identifying Vendors of Hidden

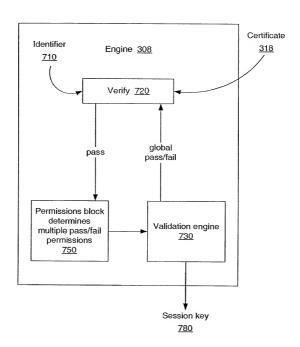


FIG. 7A

First Inventor: Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content Revocation list is copied onto engine from media and Revocation list updated when player is connected to set of CKDRM Certificates signed with one or more could include "poison pill" that prevents player from working if it is not proper player, manufacturer had Revocation of one or more signature keys revokes Revocation list evaluation made upon file access information, result for each node is stored 714 Upon file access and evaluation of revocation defects, latent defects, or the like 716 server to unlock data 718 keys 722 712 Use identifier to qualify Transmit session key Receive certificate from destination destination 702 704 902

Attorney Docket No.: M-12039 US

particular product line, particular product model 724

Revocation revokes one ore more of single Device

Identifier or Protocol Public Key, entire company,

Attorney Docket No.: M-12039 US First Inventor: Steven B. Vo Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content fidentical node is found, add DfsId number of Engine adds new DfsId value into ContentKey existing node to RevocationIdList in CKDRM During allocation of CKDRM metadata, use NodeCount value to create enough space If node is not found, create new node with For each node in revocation list, engine compares node to each node that is in existing revocation list 754 metadata structure 756 metadata structure 762 unique DfsId 758 memory 752

> Combine results from clause nodes according to clause

rules 734

evaluated against contents of

CKDRM certificate 732

Evaluate data in clause node

according to function results

of true or false when

FIG. 7D

Revoke host if any revocation

node in revocation list

evaluates to true

736

Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Method for Identifying Vendors of Hidden
Content

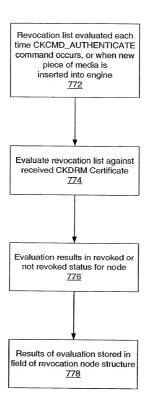


FIG. 7F

Attorney Docket No.: M-12039 US First Inventor:

Title:

Steven B. Volk

System and Method for Identifying Vendors of Hidden

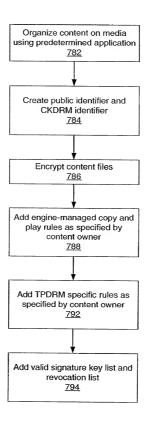


FIG. 7G

Title: Steven B. Vo

System and Method for Identifying Vendors of Hidden

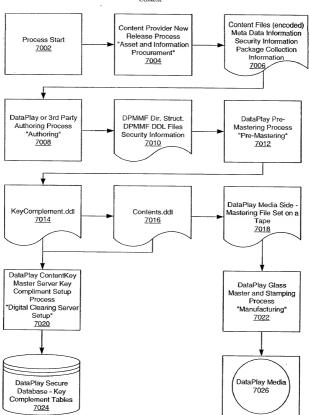


FIG. 7H

Title: Sys

System and Method for Identifying Vendors of Hidden

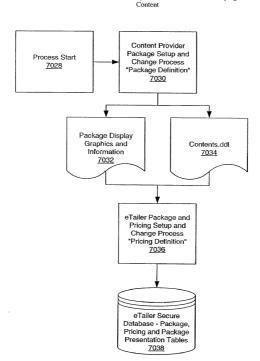


FIG. 71

Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Method for Identifying Vendors of Hidden
Content

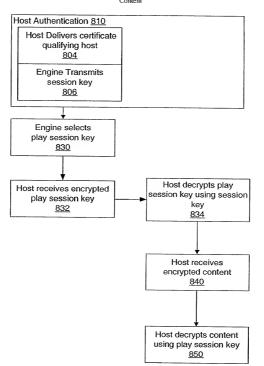


FIG. 8

Title: System and Method for Identifying Vendors of Hidden

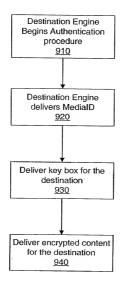


FIG. 9

Title: System and Method for Identifying Vendors of Hidden

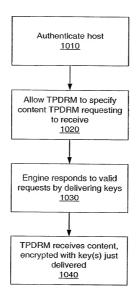


FIG. 10

Title: System and Method for Identifying Vendors of Hidden

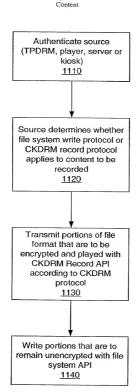


FIG. 11

Title: System and Method for Identifying Vendors of Hidden

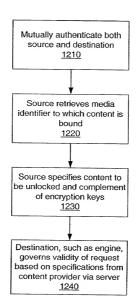
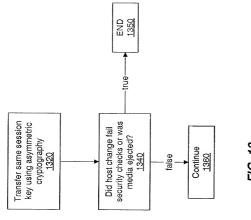
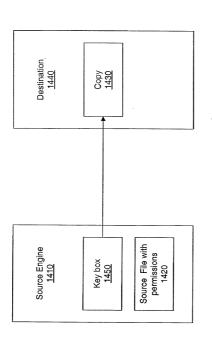


FIG. 12

Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Method for Identifying Vendors of Hidden
Content



Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Method for Identifying Vendors of Hidden
Content



First Inventor: Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content Host Application determines files to import 1510 Host Application determines attributes of file to be created 1520 Host Application determines DFS handle of destination directory 1540 Host issues CKCMD\_AUTHENTICATE 1560 Engine returns secure session key <u>1570</u> Host issues CKCMD\_GET\_CERTIFICATE 1580 Host verifies engine and extracts public key 1590 Host creates destination file 1592 Host issues DFSCMD GETHANDLE to retrieve handle of new file 1594 Host sets attributes 1596 Host writes contents to file 1598 Host sends file in data transfer 1599

Attorney Docket No.: M-12039 US

FIG. 15

Attorney Docket No.: M-12039 US First Inventor:

Title:

Steven B. Volk

System and Method for Identifying Vendors of Hidden

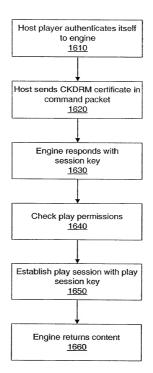


FIG. 16

Title: System a

System and Method for Identifying Vendors of Hidden

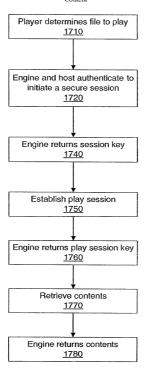


FIG. 17

Title: System and Method for Identifying Vendors of Hidden

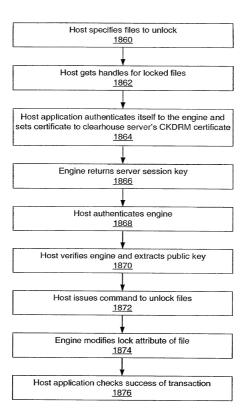


FIG. 18

Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Me

System and Method for Identifying Vendors of Hidden

Content

Host sends TPDRM certificate 1920 TPDRM authenticates itself to engine 1910 Engine responds with session key 1930 TPDRM retrieves secure metadata 1940 Engine returns key for decryption metadata and encrypted metadata <u>1950</u> TPDRM checks permissions and return play session key and revocation list for file 1960 Value for file is decremented 1970

FIG. 19

Engine returns content for file 1980

Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Method for Identifying

:: System and Method for Identifying Vendors of Hidden

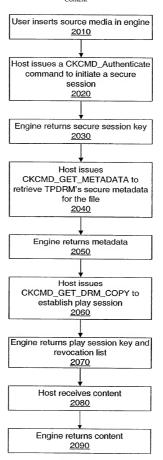


FIG. 20

Title: System and Method for Identifying Vendors of Hidden



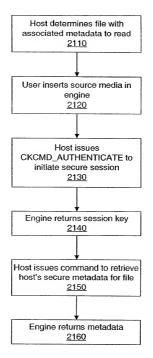


FIG. 21

Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Marked for Ide

Title: System and Method for Identifying Vendors of Hidden Content

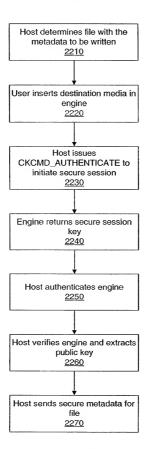


FIG. 22A

First Inventor: Steven B. Volk
Title: Steven B. Volk
System and Method for Identifying Vendors of Hidden

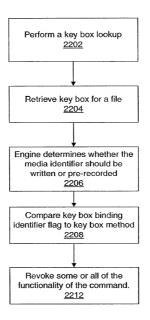


FIG. 22B

Title: System and Method for Identifying Vendors of Hidden

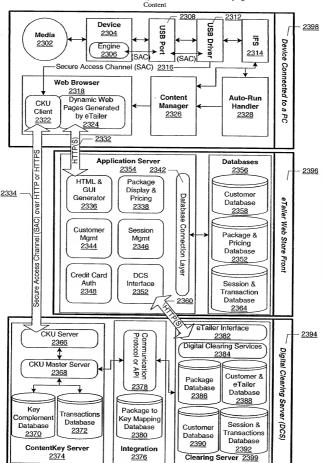


FIG. 23A

Attorney Docket No.: M-12039 US

First Inventor: Steven B. Volk

Title: System and Method for Identifying Vendors of Hidden

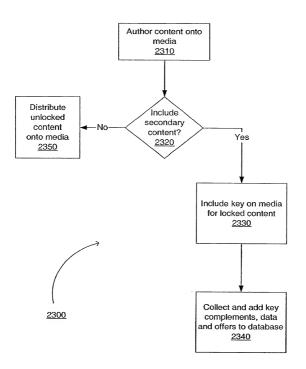


FIG. 23B

Title: System and Method for Identifying Vendors of Hidden

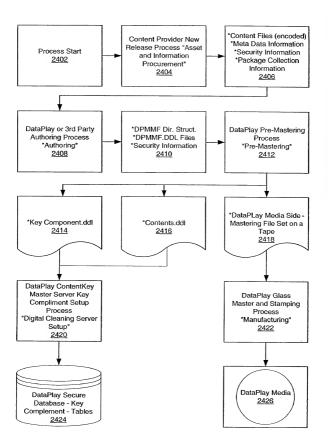


FIG. 24

Title: Syste

System and Method for Identifying Vendors of Hidden Content

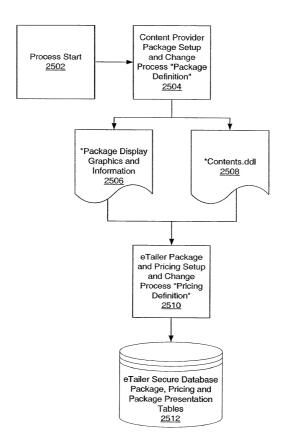


FIG. 25

Title: System and Method for Identifying Vendors of Hidden Content

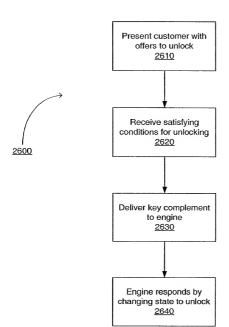


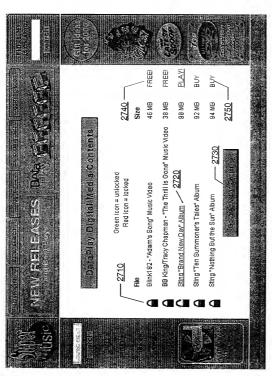
FIG. 26

Attorney Docket No.: M-12039 US First Inventor:

Title:

Steven B. Volk System and Method for Identifying Vendors of Hidden

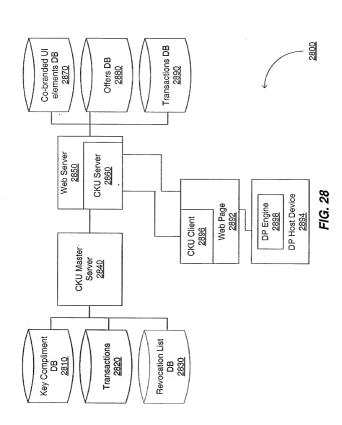
Content



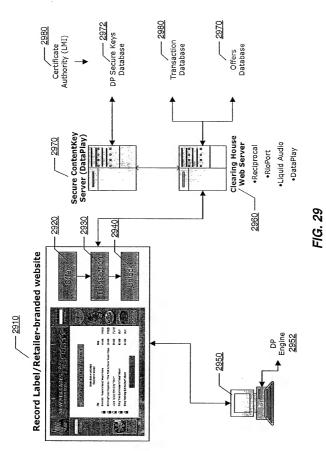
2700

Attorney Docket No.: M-12039 US First Inventor: Steven B. Volk First Inventor: Title:

System and Method for Identifying Vendors of Hidden Content

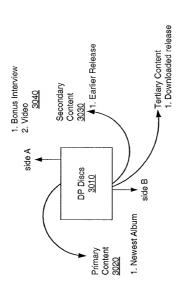


Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Method for Identifying Vendors of Hidden
Content



Attorney Docket No.: M-12039 US
First Inventor: Steven B. Volk
Title: System and Me

System and Method for Identifying Vendors of Hidden Content



Attorney Docket No.: M-12039 US First Inventor: Steven B. Volk First Inventor: Title:

System and Method for Identifying Vendors of Hidden

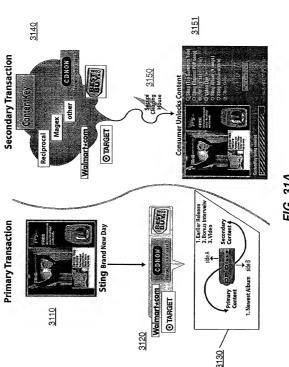


FIG. 31A

Attorney Docket No.: M-12039 US First Inventor: Steven B. Volk

Title: Steven B. Volk
System and Method for

System and Method for Identifying Vendors of Hidden

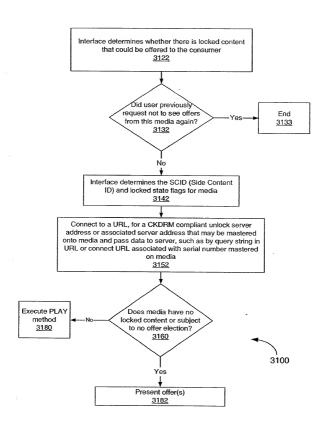
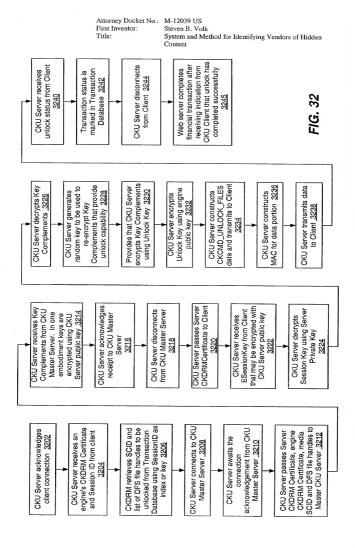


FIG. 31B

First Inventor: Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content Locate driver for connected device 3114 Connect to engine and retrieve CKDRM certificate 3124 Connect to CKU Server, use, for example, socket mode set such as BSD/WinSock with SOCKET STREAM mode set 3126 Await acknowledgement from CKU Server 3128 Deliver engine's CKDRM Certificate to CKU Server 3134 Receive CKU Server CKDRM Certificate 3144 Pass server certificate to engine use CKCMD AUTHENTICATE 3154 Retrieve ESessionKey and pass it to CKU Server 3164 Receive unlock data from server and pass it to engine use CKCMD\_UNLOCK FILES 3174 Report status of unlock operation to server 3184 update play list on media that is coupled to engine to include newly unlocked content 3194

FIG. 31C



First Inventor: Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content Master Server accepts connection from CKU Server 3310 Master Server acknowledges connection 3320 Master Server receives CKU Server CKDRM Certificate, engine's CKDRM Certificate, media SCID and DFS file handles from CKU Server 3330 Master Server verifies validity of both certificates by, for example, checking MAC and PKI signatures 3334 Master Server checks Revocation database to make sure there are no revoked certificates pending 3336 Master Server retrieves requested Key Complements from Key Complement Database 3340 Master Server encrypts Key Complements using CKU Server Public Key 3350 Master Server transmits encrypted data to CKU Server 3360 Master Server receives acknowledgement from CKU Server and disconnects 3370

FIG. 33

First Inventor: Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content Client accesses formatted URL, such as URL on media disk or URL associated with serial number on media disk or other source 3410 Client presents query string containing SCID and locked content status 3420 Web server constructs page to present offers to consumer using data from Offers and UI Elements databases 3430 Web server delivers "Unlocking in Progress" page to client 3440 Web server generates unique SessionID that is used later to commit transaction after unlock process is verified 3450 Web page embeds CKU Client object and contains client-side script that tells CKU Client to begin unlock process 3454 Web server stores the SCID and list of DFS File Handles indexed by SessionID in Transaction Database for later use by CKU Server object 3456

FIG. 34

Attorney Docket No.: M-12039 US First Inventor: Steven B. Volk Title System and Method for Identifying Vendors of Hidden Content CKU Server sends unlock retransmit message 3576 Fransaction Database and of transaction to web page by sending event to event handler in web page 3590 message to CKU Client CKU Cilent responds with error or unlock complete message to CKU Server CKU Server marks status CKU Client reports status Web page displays transaction status 3592 CKU Server generates CKU Client sends either of unlock operation in disconnects from CKU acknowledgment or random key 3572 Client 3580 3574 3578 CKU Client responds with either acknowledgment or CKU Server responds with retransmit message 3568 authentication command complements with private CKDRM Certificate to packet to send through encrypted session key CKU Server transmits authenticate message CKU Client constructs driver to engine 3552 Engine responds with Server in session key CKU Server decrypts CKU Client using CKU Client passes session key to CKU acknowledgment or session key and key retransmit 3560 message <u>3566</u> either server key 3570 3564 Server responds with error checks for presence of certificates in Revocation If certificates are invalid or associated database and CKU Server receives Key receive error, CKU Server acknowledges receipt of responds with retransmit revoked, CKU Master f certificates are valid, encrypts them 3550 complements to CKU CKU Master Server CKU Master Server CKU Master Server complements from if data mismatch or message 3548 message 3556 Complements. retrieves key transmits key Server 3552 database 3546 data acknowledgment or, if any CKU Server connects to ransmits It to CKU Master problems occur retransmit corresponding record in accepts connection and Fransaction Database CKU Server assembles CKDRM certificates of ooth engine and CKU CKU Server locates CKU Master Server CKU Master Server listening port 3536 message packet to CKU Master Server CKU Master Server acknowledgment request keys and validates or denies message 3538 server 3540 responds with packet 3542 Server 3544 replies with 3524 nstantiated and initialized with Session ID, SCID and ncoming connection from Deliver a page to cirent. CKU Client locates driver for device that contains media with content to be client and acknowledges Sertificate and SessionID CKU Server responds with either an acknowledgment engine's CK Certificate IP: PORT address for or retransmit message CKU Client object is CKU Server 3510 CKU Client obtains CKU Server accepts CKU Client transmits to CKU Server 3520 CKU Client makes connection 3516 engine's CKDRM connection with scknowledgment message 3518 offered 3512 3514

Attorney Docket No.: M-12039 US

First Inventor: Steven B. Volk Title:

System and Method for Identifying Vendors of Hidden

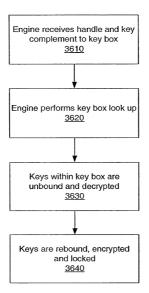


FIG. 36

First Inventor: Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content DataPlay Media Inserted into DataPlay-enabled Process Start Auto-Run Handler Device that is 3702 3706 Connected to a PC via the USB port 3704 Content Manager ContentKey Portal Presentation of ContentKey Login (not required) Locked Content 3712 <u>3710</u> 3708 Package/Pricing Enter Billing and/or Presentation of Presentation -Customer Transaction Consumer Selects Information Summary Content to Unlock Questions 3718 3714 3716 Credit Card Presentation of Digital Clearing Authorization ContentKey Server Notification (not required) **Enabling Status** 3722 3720 3724 ContentKey Engine Key Complement Contents.ddl File and Server Lookup, Delivery Update and Writing Authentication 3730 3726 3728 3700 ContentKey eTailer Transaction Presentation of Transaction Complete "Congratulations" Complete Event Notification Page 3732 3734 3736 FIG. 37

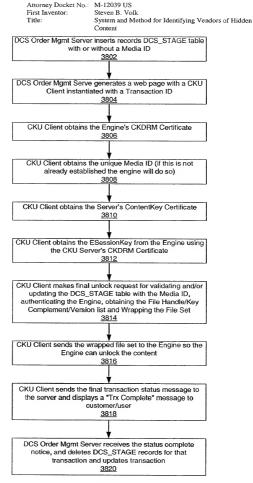


FIG. 38

Attorney Docket No.: M-12039 US First Inventor: Steven B. Volk

Title: System and I

System and Method for Identifying Vendors of Hidden Content

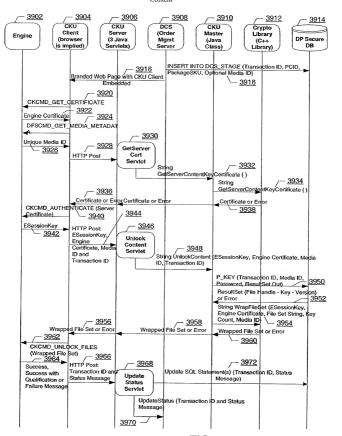


FIG. 39

Attorney Docket No.: M-12039 US First Inventor: Steven B. Volk Title: System and Method for Identifying Vendors of Hidden Content Receive media containing locked content 4002 Auto-Run Handler (or Content Manager) requests and obtains a Contents.ddl 4004 Auto-Run Handler (or Content Manager) parses the Contents ddl fie to obtain the PackageCollectionID, PackageCollectionSKU, UnlockURL, Primary PackageSKU List + Business Entity ID, and a list of previously unlocked PackageSKU's 4006 Auto-Run Handler (or Content Manager) appends the data to the URL and opens the default browser which will display a web page created by the eTailer 4008 ETailer presents user/customer with a series of pages to process the eCommerce transaction 4010 After a user/customer completes the transaction (e.g. clicking button and prompting eTailer) thereby requesting eTailer to notify the DCS of the ContentKey Unlock Transaction, eTailer passes the DCS the PCID, and a list of PackageSKU's that are to be unlocked 4012 The DCS Order Mgmt component generates a unique Transaction ID and will not know so it will contain a null value. 4014

insert one record for each Package purchased. At this point, the Media ID is

The DCS replies to the eTailer with a failure message or a URL that the user/ customer uses to unlock content. The Unlock URL contains the Transaction ID that was generated by the DCS. 4016

The eTailer generates a final confirmation and unlock instructions page that contains the Unlock URL. 4018

FIG. 40

Attorney Docket No.: M-12039 US First Inventor: Steven B. Volk

Title:

System and Method for Identifying Vendors of Hidden

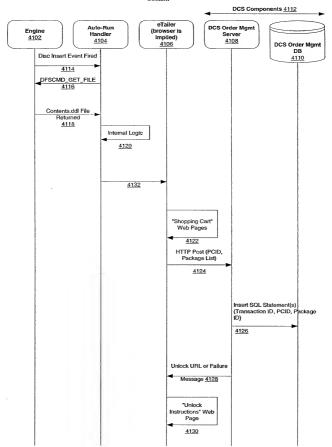


FIG. 41